Amendments to the Specification:

Please replace the paragraph beginning at page 14, line 11 with the following redlined paragraph:

Each motor 124 is typically a DC motor that displays minimal back drive friction. The shaft of each motor 124 is drivingly coupled to a spool 126, which is in turn coupled to a cable 11. When the motor 124 turns the respective pulley 126, the cable 11 wraps or unwraps around the pulley 126. Tension occurs in each cable 11, 12, 13 and 14 ~~since~~ because the cables 11, 12, 13 and 14 pull at the tool 160 in opposing directions. The ~~display~~ tension applied to each cable 11, 12, 13 and 14 is based on the torque applied by the motors 124 to the spool 126 as governed by the control device 200. In order to reduce backlash, a gear is not used, however some embodiments may include a gear where suitable.

Please replace the three paragraphs beginning at page 21, line 26 with the following three redlined paragraphs:

6) When powering down the system 10, the calculation device 300 first signals for the current to be removed from each spring actuated brake ~~128~~ 129 attached to the motor spool 126 of the tool translation effecters 120, 130, 140 and 150. This prevents the motors 124 from spinning their respective spools 126. This also keeps the encoders 125 locked in position. The calculation device 300 can then store the current pulse count from all the encoders 125 before completely powering down the system.

7) The next time the system 10 is powered up, the encoder pulse count values are then restored to each encoder 125 based on the values stored by the calculation device 300. Current to the brakes ~~128~~ 129 is then re-established by the calculation device 300, which releases the hold on the motor spools 126. The tracking of the lengths of cables 11, 12, 13, and 14 can then resume as it did before the system 10 was last powered down.

The process to relay position, orientation and rotational information of the tool 160 to the calculation device 300 ~~though~~ through optical encoders and/or sensors such as gyro sensors, acceleration sensors, infrared or electromagnetic tracking mechanisms located in and/or around the tool 160 will now be discussed. The optical encoders 125 of the tool translation effecter devices 120, 130, 140, 150 output analog signals that are transferred to an A/D converter

230. These signals are then converted to digital signals that are relayed to the calculation device 300 as encoder pulse counts. The digital signals are transferred to the position calculation part 320 of the calculation device 300 by way of the encoder counter part 220. The encoder pulse counts are used to determine the lengths of the cables 11, 12, 13, and 14.